

**AMENDMENTS TO THE DRAWINGS**

Please replace drawing sheet for Fig. 16 with the enclosed replacement sheet.

### **REMARKS**

Claims 1, 2 and 4-23 are currently pending in the subject application and are presently under consideration. Independent claims 1, 9, 13, 18, and dependent claim 5 have been amended herein.

Favorable reconsideration of the subject patent application is respectfully requested in view of the comments and amendments herein.

#### **I. Objection to Drawings**

The drawings are objected to as failing to comply with 37 CR 1.84(p)(5), because of minor informalities. A typographical error is noted in the Office Action on Page 3, paragraph 2, wherein instead of Fig. 16, reference is provided to Fig. 6. Applicant's representative has amended Fig. 16 (replacing the symbol "m" with "μ amps".)

It is respectfully submitted that contrary to assertions made in the Office Action, proper reference to "controller 102" is supplied in the Specification, (*e.g.*, See page 7 line 12.) Moreover, proper reference for the term "E0" (Electric Field at Interface) was previously submitted as part of an updated Fig. 8; which accompanied the "Reply to Office Action Dated July 19, 2005" (faxed on October 19, 2005.) Furthermore, it is respectfully submitted that the drawings properly show features of claim 8, (*e.g.*, Fig. 6a electrode components A, B, C), and a detailed illustration of the read and write circuits is not essential for a proper understanding of the invention.

In light of the above comments, withdrawal of this objection is respectfully requested.

#### **II. Objection of Claims 1 and 18**

Claims 1 and 18 are objected to because of minor informalities -such claims are amended herein, and withdrawal of this rejection is respectfully requested.

#### **III. Rejection of Claims 1, 2, 4-8 and 18-21 Under 35 U.S.C. §102(e)**

Claims 1, 2, 4-8 and 18-21 stand rejected under 35 U.S.C. §102(e) as being anticipated by Yang *et al.* (US Patent 6,950,331). Withdrawal of this rejection is respectfully requested for at least the following reasons. Yang *et al.* does not teach or suggest the claimed invention.

For a prior art reference to anticipate, 35 U.S.C. §102 requires that “each and every element as set forth in the claim is found, either expressly or inherently, in a single prior art reference. In re Robertson, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950 (Fed. Cir. 1999) (quoting *Verdegaal Bros., Inc. v. Union Oil Co.*, 814 F.2d 628, 631, 2USPQ2d 1051, 1053 (Fed. Cir. 1987)).

The subject invention as claimed relates to a memory cell that can accept and maintain more than two programmable states, (in contrast to a conventional memory device *that is limited to two states* such as off or on). Accordingly, each memory cell of the subject innovation can *employ varying degrees of conductivity to identify additional states*. For example, the memory cells can have a very highly conductive state (very low impedance state), a highly conductive state (low impedance state), a conductive state (medium level impedance state), and a non-conductive state (high impedance state), thereby enabling the storage of multiple bits of information in a single memory cell, such as 2 or more bits of information or 4 or more bits of information (*e.g.*, 4 states providing 2 bits of information, 8 states providing 3 bits of information and the like.) Such aspects of the claimed invention are not taught or suggested by Yang *et al.*

Rather, Yang *et al.* is directed to a *bistable* electrical device that employs bistable qualities - a phenomenon in which an object *exhibits two states* of different conductivity at the same applied voltage. Yang *et al.* employs a high conductivity material as part of the bistable body to impart bistable between a low resistance state and a high resistance state by application of an electrical voltage - not *two or more programmable states* as in the claimed invention.

Independent claim 1 recites “the impedance state(s) indicative of “*more than two programming states of the memory cell*” and independent claim 9 recites “[...] of more than *two impedance* states of the memory cell. Likewise, independent claim 13 recites “to one of more *than two operating states* of the memory cell”, and independent claim 18 recites “one of more than *two impedance states* of the memory cell”. A similar limitation of “to indicate one state of more *than two impedance states* of the memory cell” is recited in independent claim 22. It is readily apparent that Yang *et al.* does not teach or suggest such aspects of applicants claimed invention.

In view of the at least above comments, it is respectfully submitted that Yang *et al.* does not anticipate or render obvious the subject claims, and this rejection should be withdrawn.

**IV. Rejection of Claims 9-17, 22 and 23 Under 35 U.S.C. §102(e)**

Claims 9-17, 22 and 23 stand rejected under 35 U.S.C. §102(e) as being anticipated by Bulovic *et al.* (US Patent 6,781,868). Withdrawal of this rejection is respectfully requested for at least the following reasons.

As explained earlier, independent claim 9 (claims 10-12 dependent therefrom), independent claim 13 (claims 14-17 dependent therefrom), and independent claim 22 (claims 23 dependent therefrom), are directed to a memory cell that can accept and maintain more than two programmable states *via* impedance changes of memory cell - and Bulovic *et al.* does not teach or suggest such subject matter. Bulovic *et al.* is directed to a memory device with dual "On" or "Off" electrical device, and not *two or more programmable states* as in the claimed invention.

In view of the at least above comments, it is respectfully submitted that Bulovic *et al.* does not anticipate or render obvious the subject claims, and this rejection should be withdrawn.

**CONCLUSION**

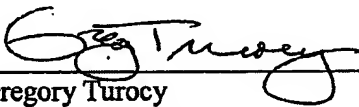
The present application is believed to be in condition for allowance in view of the above comments and amendments. A prompt action to such end is earnestly solicited.

In the event any fees are due in connection with this document, the Commissioner is authorized to charge those fees to Deposit Account No. 50-1063 [AMDP1027US].

Should the Examiner believe a telephone interview would be helpful to expedite favorable prosecution, the Examiner is invited to contact applicant's undersigned representative at the telephone number below.

Respectfully submitted,

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